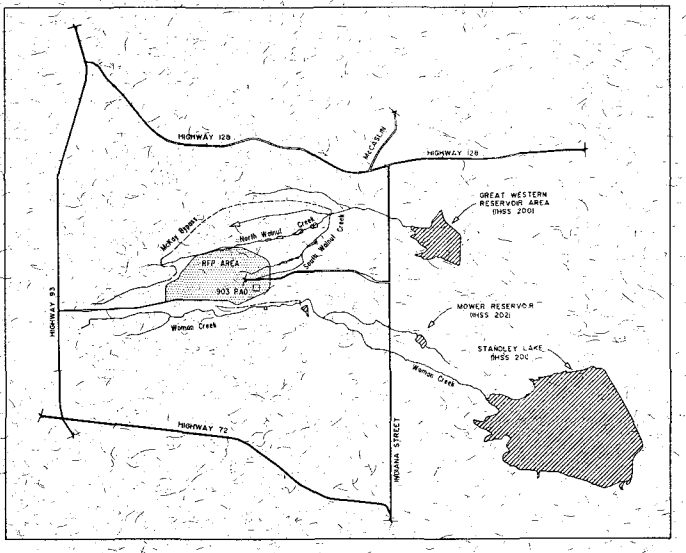
ROCKY FLATS
ENVIRONMENTAL RESTORATION UPDATE

A PERIODIC UPDATE ON ROCKY FLATS CLEANUP • MAY/JUNE 1992

Field Sampling at OU3

The U.S. Department of Energy (DOE)/EG&G recently began field sampling activities at off-site locations that comprise the Operable Unit 3 (OU3) remedial investigation area of the Rocky Flats Plant (RFP). Drill rigs, boats, backhoes, and other equipment used in sampling activities will likely be visible throughout OU3 while sampling is conducted. OU3 is unique in that it is the only OU located outside the Plant boundaries.

Field sampling activities are designed to evaluate whether OU3 soils contain radioactive contaminants deposited by wind resuspension. Sampling is scheduled to be conducted through February 1993 at Standley Lake, Great Western Reservoir, Mower Reservoir, and the surrounding land. The U.S. Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) have approved this field sampling program, which will include soil, sediment, surface water, ground water, air, plant, and animal studies.



Plutonium was previously detected in the bottom sediments of Great Western Reservoir and Standley Lake, but water quality levels were not measurably impacted and tap water monitors indicate levels meet CDH safe drinking water standards. The plutonium previously detected has been covered by sediments that restrict its ability to migrate. Sampling activities will focus primarily on plutonium and americium, but will also include uranium and metals.

Details of the sampling program are contained in the RCRA Facility Investigation/Remedial Investigation Work Plan for OU3, which will be available in the Reading Rooms listed on page 3. The following types of field sampling activities will take place:

Soil – Surface soil samples to a depth of less than 0.25 inches will be collected to the north, east, and south of the RFP boundaries. Deeper soil samples will also be collected to see if potential radionuclide contamination changes with depth.

Sediment – Sediment samples will be collected from ditches, drainages, and reservoirs located east of Indiana Street. Sediments collected from Standley Lake, Great Western Reservoir, and Mower Reservoir will be collected from a boat using a sampler that reaches the bottom of the lake. This sampling will be conducted in a manner that minimizes disruption to bottom sediments. Sediment samples will also be collected along the shorelines of all three reservoirs to characterize the sediments that are exposed when the reservoirs are at a low capacity.

Surface Water – Surface water samples will also be collected from ditches, drainages, and reservoirs located east of Indiana Street. The surface water samples collected from Standley Lake, Great Western Reservoir, and Mower Reservoir will be collected from a boat at different points on the reservoirs.

Ground Water – Four ground water monitoring wells will be drilled, installed, and sampled on the east side of Standley Lake and Great Western Reservoir.

Air – Three continuous air sampling stations will be installed near Standley Lake to collect data on the potential presence of radionuclides in the air at these locations. The stations will be in place for approximately one year. A portable wind tunnel will also be used at Standley Lake, Great Western Reservoir, and a vegetated area between the two reservoirs. Various wind speeds will be tested to assess the potential for resuspension of soils and sediments.

Plants and Animals – Ecological studies, including vegetation and small mammal collection, will be conducted to evaluate whether contamination from radionuclides has affected these ecological resources. Some small mammals, such as mice, voles, and prairie dogs, will be trapped for the study and later released.

Aquatic Life – Microscopic aquatic organisms, sediment-dwelling invertebrates, and fish will be collected to determine if radionuclides have affected ecological resources. The fish will be collected by

See **OU3 Sampling,** page 2

OU1 French Drain Completed

Construction of the OU1 French drain (881 Hillside) was completed on April 3, 1992. The drain is now collecting ground water from sources within OU1. Due to geological conditions and safety issues, the length of the drain was shortened by approximately 500 feet on its western end. The last 500 feet of the drain would have collected ground water that is not thought to be contaminated, based on recent sampling and flow modeling.

The unusually heavy snow in November 1991 and again in January 1992 combined with unusually warm temperatures in February and March 1992 hindered timely completion of the OU1 French drain. The warm weather prompted excessive snowmelt, which compounded construction problems in the western portion of the excavation area, where soils are saturated with ground water. As a result, slumping of the hillside occurred, making working conditions dangerous.

To reduce the health and safety risk to workers and the potential for geotechnical stress to a nearby gas transmission line, construction of the French drain was limited to approximately 1500 feet, rather than the originally-planned 2000 – 2100 feet.

This adjustment to the length of the French drain was approved by CDH and EPA, with a few additional stipulations. Eleven monitoring wells will be installed around the west, east, and south sides of the drain to verify proper operation of the French drain. EPA and CDH have the authority to require extension of the drain by 500 feet if the monitoring wells indicate that contaminants are present in the ground water in that area.

The OU1 collection system at the base of the French drain pumps ground water to a newly-constructed treatment plant (Building 891). Contaminants are removed and treated water is discharged to the South Interceptor Ditch, which drains into holding pond C-2. This process is designed to prevent the release of any contaminated ground water from OU1 to the Woman Creek drainage.

OU1 is being treated as a high-priority operable unit because of its proximity to public drinking water sources and the potential for contamination from elevated concentrations of volatile organic compounds in the ground water. Volatile organic compounds are chemicals containing mainly carbon, hydrogen, and oxygen that tend to vaporize at room temperature and can produce toxic effects on body tissues and processes. ■

IAG Schedule Change

The following changes have been made to the deliverable dates for OU14 RCRA Facility Investigation/Remedial Investigation Draft Phase 1 Workplan:

Original Date	Current Date
May 22, 1992	June 26, 1992

OU3 Sampling, continued from page 1

shocking and netting (shocking temporarily stuns the fish so they can be netted); after study, most of the fish are then released.

For background information on OU3, please refer to the August 1991 issue of the *Environmental Restoration Update*. For additional information or questions regarding sampling activities, please call Michael McHugh, EG&G Community Relations, at 966-6158. ■

Permit Modification

DOE and EG&G have requested and received a Class 1 modification to their Resource Conservation and Recovery Act (RCRA) permit. Modification 7 will minimize duplication of definitions and specifications in the permit. The modification does not change any permit conditions.

Class 1 modifications are considered minor changes that keep the permit current with routine changes to the facility or its operations. These changes do not substantially alter the permit conditions or affect the capacity of RFP to protect human health or the environment. Accordingly, they do not require prior approval from CDH, public comment periods, or public meetings.

Modification No. 7 became effective on March 13, 1992, and was submitted to CDH on March 20, 1992, in accordance with the Colorado Hazardous Waste Regulations.

It is anticipated that the next permit modification request will be submitted to CDH in late June 1992. ■

RFP Transition Plan

As reported in the last issue of the *Update*, RFP is undergoing a change in mission. A transition plan outlining the transition process has been drafted. The final version of the transition plan is due to DOE Headquarters in Washington, D.C., on July 3, 1992, and will be sent to Congress by July 31, 1992. An article describing the final transition plan will be included in a future issue of the *Update*. ■

Open House for Community Radiation Monitoring Program

DOE/EG&G have completed a community-operated and publicly-accessible air monitoring station at the Standley Lake Library in Arvada. The station collects air quality data and displays the results, except for the ambient air sampler. As part of the Community Radiation Monitoring Program, the new station will be supplemented by additional stations in Broomfield, Westminster, Northglenn/Thornton, and a second station in Arvada.

The Community Radiation Monitoring Program is designed to provide opportunities for area residents to view air quality data for their communities at any given time. The station provides current data on community radiation levels and features displays to help interested residents learn about the basic concepts of radiation. Monitoring results will supplement data from the air monitoring stations already established both on and off the Plant.

The monitoring program was initiated in September 1990, when technical representatives from several municipalities and Jefferson County, EPA, CDH, DOE, and EG&G met to begin planning. The group then evaluated and selected equipment and sites for the stations.

Each station will consist of DOE-purchased equipment to sample air, measure exposure from environmental sources of radiation, and record weather conditions.

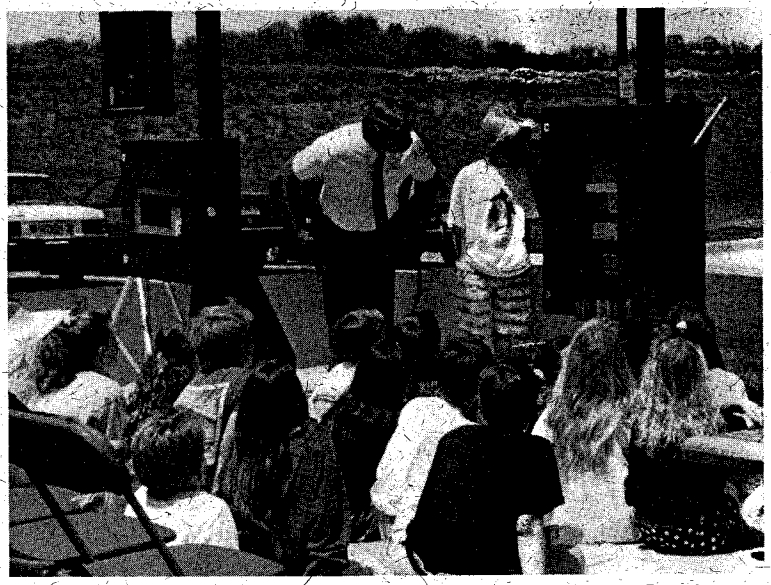


Photo courtesy of Barbara Yost, Jefferson County Library Board

The three main types of equipment are described as follows.

1. Ambient Air Sampler: continuously pulls air through a filter that traps small airborne particles. The filters are analyzed for the presence of radioactive particles.

2. Gamma Detector: measures the exposure rate of gamma radiation in the area surrounding the station.

3. Weather Station: provides current (real-time) weather data such as temperature, wind speed and direction, and barometric pressure.

A local program administrator will be recruited to oversee management of the program. The administrator will employ and provide ongoing training to the station managers and alternate managers for each community station. The station managers (teachers from local school districts) will perform duties to include reporting and posting data. Project manager duties include sampling, data management and reporting, and routine equipment maintenance. Results of the Standley Lake sampling will be reported at the monthly State Information Exchange meetings by the community technical representative from Arvada.

The first Community Radiation Monitoring Station open house was held on May 16, 1992 at the Jefferson County Library, Standley Lake Branch station, located at 8485 North Kipling Street. ■

Public Invited to Use Reading Rooms

The following reading rooms contain current information, technical reports, and reference documents on environmental restoration at the Rocky Flats Plant:

Rocky Flats Public Reading Room*
Front Range Community College Library
3645 West 112th Avenue
Level B, Center of Building
Westminster, Colorado 80030
303-469-4435
Hours:
Monday – Tuesday 12:00 pm – 8:00 pm
Wednesday 10:00 am – 4:00 pm
Thursday – Friday 8:00 am – 4:00 pm

Rocky Flats Environmental Monitoring Council*
1536 Cole Boulevard, Suite 325
Denver West Office Park, Building 4
Golden, Colorado 80401
303-232-1966
Hours:
Monday – Friday 8:30 am – 5:00 pm

EPA Superfund Records Center*
999 18th Street, Suite 500
Denver, Colorado 80202-2405
303-293-1807
Hours:
Monday – Friday 8:00 am – 4:30 pm

*Information Repository

Colorado Department of Health*
Rocky Flats Program Unit
4210 East 11th Avenue, Room 420
Denver, Colorado 80220
303-331-4855
Hours:
Monday – Friday 8:00 am – 5:00 pm

United States Department of Energy
Freedom of Information and Privacy
Branch Office
1000 Independence Avenue, S.W.
Washington, D.C. 20585
202-586-6025
Hours:
Monday – Friday 9:00 am – 4:00 pm
(Eastern time zone)

Calendar of Events

- **Rocky Flats Environmental Monitoring Council Meeting (Tentative):** 7:00 p.m., June 30 and July 28, 1992. Please call the Environmental Monitoring Council at 303-232-1966 to verify meeting date and location.
- **General Rocky Flats Plant Tours:** June 8 and July 13, 1992. Please call 966-2011 one week in advance for reservations.

New Documents

- Maximum Credible Accident Fourth Review (1988 – 1991)
- Environmental Restoration Program Monthly Report for March 1992
- RCRA Permit Modification Request No. 2
- Request to Modify State RCRA Permit – Revision 3
- RCRA Permit Modification Request No. 4
- RCRA Permit Modification Request No. 5
- RCRA Permit Modification Request No. 6
- RCRA Permit Modification Request No. 7
- Phase II Geologic Characterization Data Acquisition
- Final Proposed Interim Measure/Interim Remedial Action Decision Document for the Solar Evaporation Ponds Operable Unit 4

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EG&G Rocky Flats, Inc.
P.O. Box 464
Golden, CO 80402-0464

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